

Greening Government Offices

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E2S2
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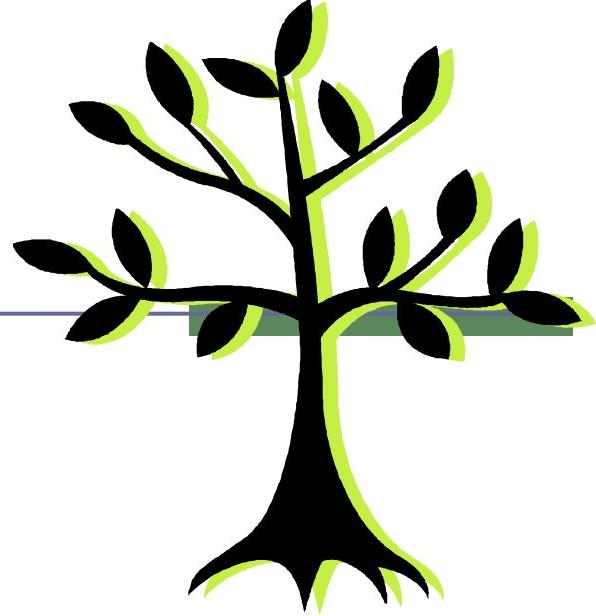
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Benefits of a Green Office

- Healthier working environment
- Improves morale (pride)
- Creates recycling markets
- Saves energy
- Conserves resources
- Saves money
- Saves landfill space
- Reduces pollution
- Reduce U.S. dependence on petroleum and other imports



Did You Know?



- Paper accounts for 40% of all waste!
- 60% of office waste!!
- The average person uses 737 pounds of paper per year!

Recycling 1 Ton of Paper...

- Saves about 17 trees
- Saves 24,000 gallons of water
- Eliminates 3 cubic yards of landfill space
- Saves enough energy to power the average home for 6 months
- Saves 4 barrels of oil
- Eliminates 60 pounds of air pollutants

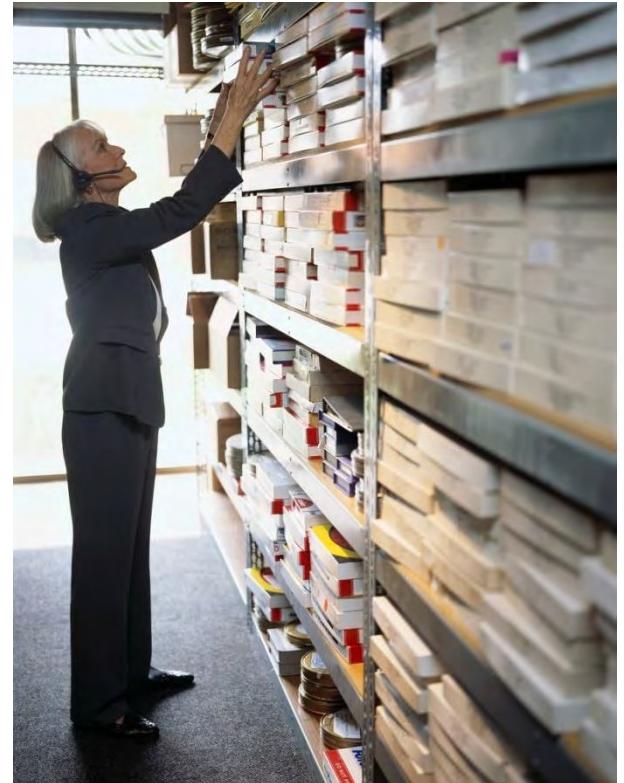
Topics

- The relationship between consumption and waste
- Reducing routine office waste
- Purchasing green office products
- Reducing fuel consumption
- Saving water and energy
- Calculating environmental benefits
- Eliciting behavior change



Consumption and Waste Generation

- Waste generation is dictated by consumption
 - How much we consume
 - What we consume
- To reduce waste generation, we must make changes in what we purchase and use.



Reducing Office Consumption = Reducing Waste

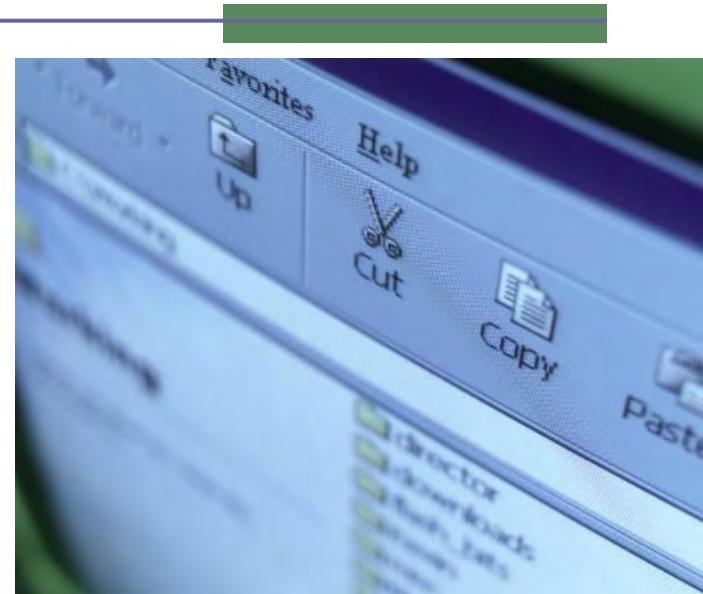
Reducing Routine Office Waste

- Eliminate the purchase of disposable plates, utensils, cups
- Maintain a minimum supply inventory
- Use newer technology toner cartridges and paper
- Stop mail deliveries to departed personnel
- Use tap water or water cooler to reduce bottled water consumption



Reducing Routine Office Waste

- Use e-mail in place of written memos
 - Save e-mail messages to files instead of printing them
 - Always print and copy double sided
 - Conduct document reviews and provide comments electronically
 - Use “print view” feature to reduce printing mistakes
 - Use less paper and compact disks by drive sharing and posting information to a web site



Reducing Routine Office Waste



- Send internal mail in reusable envelopes
- Reuse file folders by using stick-on labels
- Use routing slips instead of making multiple copies
- Reuse plastic and paperboard binders, binding combs, and report covers
- Stop mailings from unwanted magazines and catalogs
- Place 1 copy of community references (phone book, SOPS, atlas, etc.) in common area
- Extend life of computers to at least 4 years

Reducing Routine Office Waste

- Properly segregate recyclable materials
- Properly prepare recyclables, i.e.,
 - Disassemble boxes
 - Rinse bottles and cans
- Participate fully in the Recycling Program
(recycle all accepted materials)



Smart Purchasing Choices

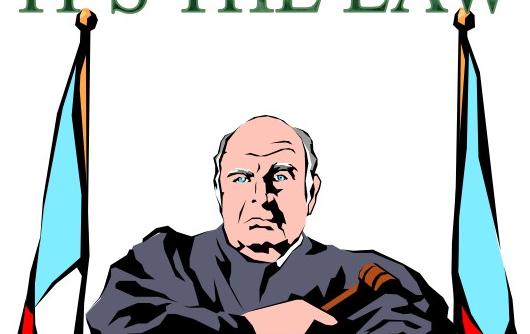
- Purchase items with less packaging
- Purchase products made with materials that will be recycled rather than disposed after use
- Purchase products with recycled or biobased content
- Purchase energy efficient and water saving products
- Purchase products that do not contain ODS or hazardous substances



Green Procurement

- There are specific requirements for the purchase of products that have/are:
 - Recycled content (Resource Conservation and Recovery Act, Executive Order (EO) 13423, and the Federal Acquisition Regulations (FAR))
 - Biobased (Farm and Security and Rural Investment Act, EO 13423, and FAR)
 - Energy efficient (Energy Policy Act of 2005 and EO 13423)

IT'S THE LAW
IT'S THE LAW



Green Procurement Requirements

- EPA's "Buy Recycled" Program
 - Products designated since 1995
 - Currently 62 designated products
- USDA's "BioPreferred" Program
 - 49 items designated since March 2006
 - 9 more proposed



EPA's Buy Recycled Program: Comprehensive Procurement Guidelines (CPGs) and Recovered Materials Advisory Notices (RMANs)

- CPGs designate the products that must contain recovered material
- RMANs provide recommended recycled-content percentages and guidance on buying recycled-content products

Example:
Recycled paper

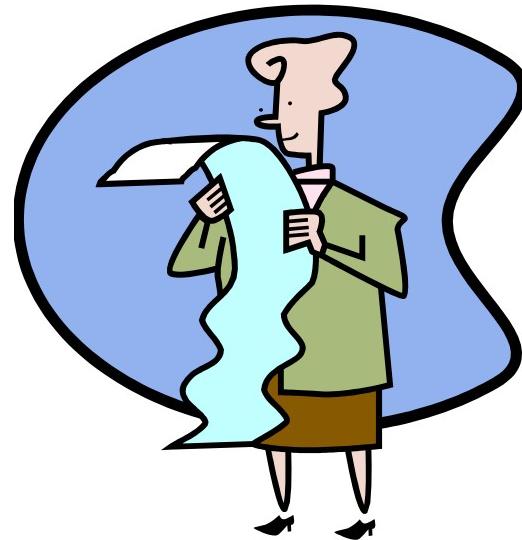


Example:
30% post consumer

EPA-Designated Products under the Buy Recycled Program

Product Categories:

- ➡ ■ Construction
- ➡ ■ Landscaping
- ➡ ■ Non-paper Office Products
- ➡ ■ Paper and Paper Products
- ➡ ■ Parks and Recreation
- ➡ ■ Transportation
- ➡ ■ Vehicular
- ➡ ■ Miscellaneous



CONSTRUCTION PRODUCTS

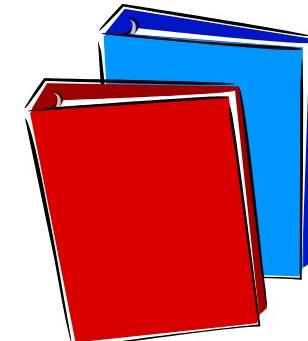
DESIGNATED CPG ITEMS:

- Building insulation
- Carpet
- Cement and concrete
- Consolidated and reprocessed latex paint
- Floor tiles
- Laminated paperboard
- Patio blocks
- Shower and restroom dividers
- Structural fiberboard
- Carpet cushion
- Flowable fill
- Railroad grade crossings/surfaces
- Modular Threshold Ramps
- Nonpressure Pipe
- Roofing Materials

NON-PAPER OFFICE PRODUCTS

DESIGNATED CPG ITEMS:

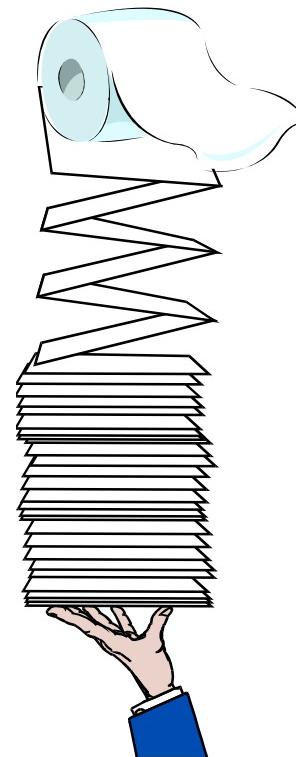
- Binders (paper, plastic covered)
- Office recycling containers
- Office waste receptacles
- Plastic desktop accessories
- Plastic envelopes
- Plastic trash bags
- Printer ribbons
- Toner cartridges
- Office furniture
- Solid plastic binders
- Plastic clipboards
- Plastic clip portfolios
- Plastic file folders
- Plastic presentation folders



PAPER AND PAPER PRODUCTS

DESIGNATED CPG ITEMS:

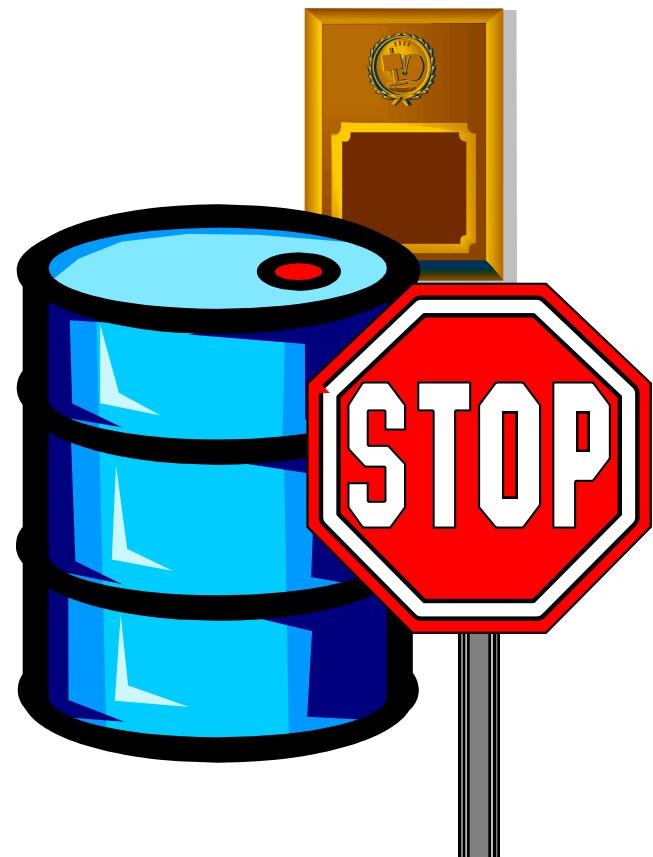
- Commercial/industrial sanitary tissue products
- Miscellaneous papers
- Newsprint
- Paperboard and packaging products
- Printing and writing papers



MISCELLANEOUS PRODUCTS

DESIGNATED CPG ITEMS:

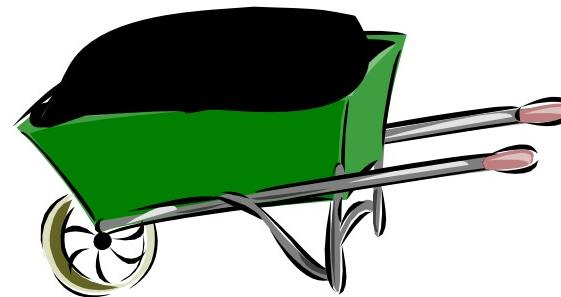
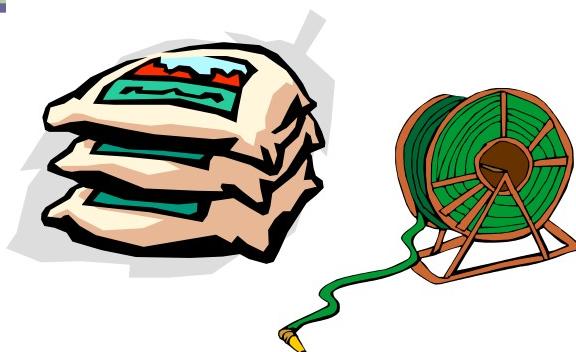
- Pallets
- Sorbents
- Awards and plaques
- Industrial drums
- Mats
- Signage, including supports
- Strapping and stretch wrap
- Bike racks
- Blasting grit



LANDSCAPING PRODUCTS

DESIGNATED CPG ITEMS:

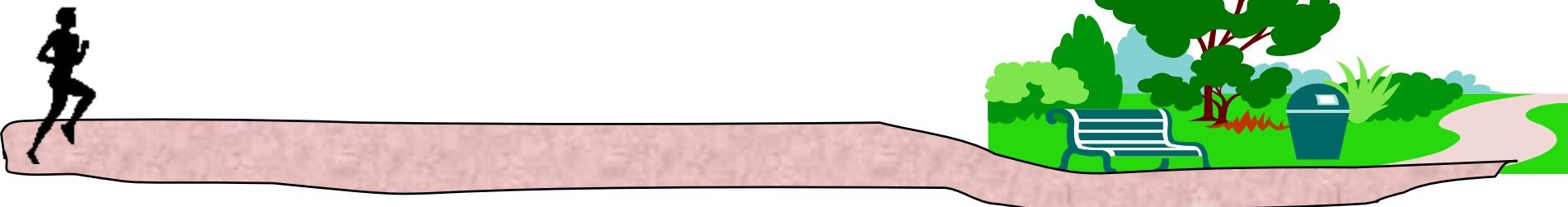
- Garden and soaker hoses
- Hydraulic mulch
- Lawn and garden edging
- Yard trimmings compost
- Food waste compost
- Landscaping timbers and posts (plastic lumber)



PARK AND RECREATION PRODUCTS

DESIGNATED CPG ITEMS:

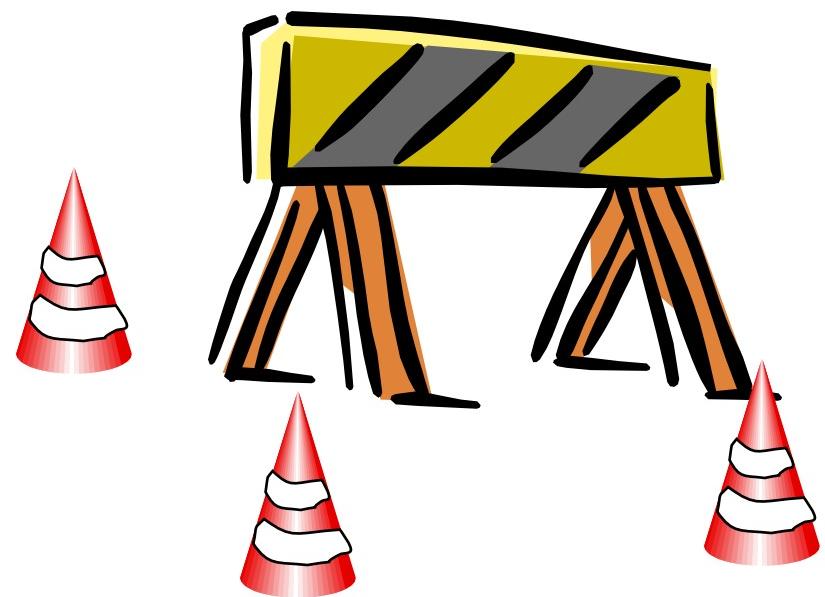
- Plastic fencing
- Playground surfaces
- Running tracks
- Park and recreational furniture
- Playground equipment



TRANSPORTATION PRODUCTS

DESIGNATED CPG ITEMS:

- Channelizers
- Delineators
- Flexible delineators
- Parking stops
- Traffic barricades
- Traffic cones



VEHICULAR PRODUCTS

DESIGNATED CPG ITEMS:

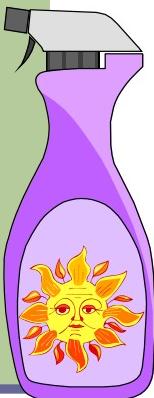
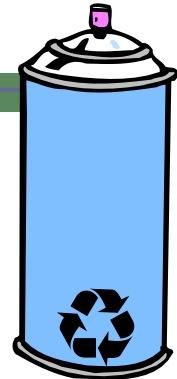
- Engine coolants
- Re-refined lubricating oils
- Retread tires
- Rebuilt vehicle parts



Examples of Designated Items under the BioPreferred Program

- Adhesive and mastic removers
 - Hand cleaners/sanitizers
 - Biodegradable containers
 - Fertilizers
 - Sorbents
 - Graffiti and **grease** removers
 - Laundry products
 - Bathroom and spa cleaners
 - De-icers
 - Films
- 
- Lip care products
 - Biodegradable films
 - Hydraulic fluids
 - Biodegradable cutlery
 - Glass cleaners
 - Greases
 - Dust suppressants
 - Carpets
 - Carpet and upholstery cleaners

What's On The Label?



■ Look For Specifics

- “50% Post-Consumer fiber” says more than “made with recycled products”
- Meets EO 13423 or CPG requirements

■ Watch Out For Misleading Claims

- “Now with higher recycled content”

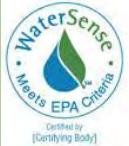
■ Beware of Ambiguity or Advertising Ploys

- “Environmentally friendly”
- “Green”
- Symbols depicting the earth or trees
- Unexplained recycling logos
- “Recyclable” – may not be recyclable

In your community



Product Certifications



- WaterSense labeled products are generally 20 percent more water-efficient than similar products
- Green Seal Assesses a broad range of environmental impacts
- Scientific Certification Systems (SCS) certifies a wide variety of claims related to environmental performance
- Forest Stewardship Council (FSC) and the Sustainable Forestry Initiative (SFI) certify paper and wood products
- Energy Star identifies energy-efficient products
- Biobased Manufacturer's Association (BMA) self-certification program

Energy Myths*

- It takes more energy to turn lights on and off than to just leave them on
- Computers last longer if left on all the time
- Batteries and film need to be refrigerated
- Maintaining a constant temperature uses less energy
- Outside lighting is required for security reasons

* Reference “Taking the Myths Out of Energy Consumption,” Don Juhasz

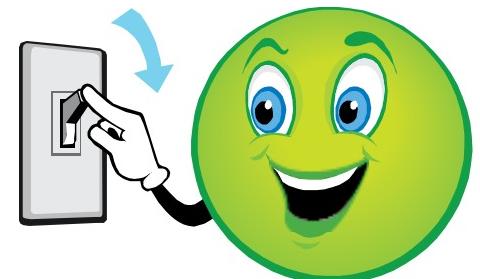
Reducing Fuel Consumption

- Participate in meetings via telephone
- Telecommute
- Carpool
- Bike or walk around post or to and from work
- Do not leave vehicles idling
- Maintain proper tire pressure



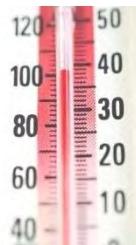
Saving Energy

- Purchase energy-consuming equipment that is EPEAT-registered, Energy Star, and/or FEMP-certified
- Be sure energy saving features are turned on
- Turn off lights when not needed
- Use occupancy sensors
- Turn off energy using equipment after hours (use power strips)
- Turn down heat or AC after hours or use programmable thermostats
- Close blinds after hours
- Close off unused offices/rooms



Saving Energy and Water

- Lower temperature of hot water
- Use energy efficient lighting where possible (including exit signs)
- Ensure outside lighting is off during the day
- Request an energy audit (free)
- Use multifunctional equipment (fax, print, copy, scan)
- Install low flow toilets in renovations
- Use water saving shower heads and faucets



Tools for Calculating Environmental Benefits



- EPA's Durable Goods Calculator – energy savings and greenhouse gas (GHG) reductions for household goods
- EPA's Waste Reduction Model (WARM) – energy savings and GHG reductions for waste management practices
- NRC Recycling Calculator – fun statistics on resource savings from recycling
- Electronics Environmental Benefits Calculator – calculates savings in nine different categories
- Northeast Recycling Council's (NERC) Environmental Benefits Calculator – energy and resource savings and GHG reductions for recycling various commodities

Tools for Calculating Resource Savings and Environmental Benefits

Paper Calculator Powered By Environmental Defense - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Search Favorites Home Print Mail Links

Address http://www2.edf.org/papercalculator/process.cfm?calcType=1 Go

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LIFECYCLE ENVIRONMENTAL IMPACTS AND EQUIVALENTS

	Baseline Paper	Target Paper I	Difference (Baseline - Target)	Target Paper II	Difference (Baseline - Target)
Wood Use	7 tons	5 tons	2 tons 14 trees	0 tons	7 tons 48 trees
Total Energy	77 million BTU's	67 million BTU's	10 million BTU's <1 homes/year	43 million BTU's	33 million BTU's <1 homes/year
Greenhouse Gases	11,380 lbs CO ₂ equiv.	10,116 lbs CO ₂ equiv.	1,265 lbs CO ₂ equiv. <1 cars/year	7,164 lbs CO ₂ equiv.	4,216 lbs CO ₂ equiv. <1 cars/year
Wastewater	38,150 gallons	32,900 gallons	5,250 gallons <1 swimming pools	20,650 gallons	17,500 gallons <1 swimming pools
Solid Waste	4,557 pounds	3,883 pounds	674 pounds <1 garbage trucks	2,309 pounds	2,247 pounds <1 garbage trucks

Display results as: chart graph
Show: basic comprehensive

Download data as: Excel file printable PDF

Tell us about yourself

START OVER EDIT PAPERS

The Paper Calculator is based on research done by the [Paper Task Force](#), a peer-reviewed study of the lifecycle environmental impacts of paper production and disposal. The underlying data are updated regularly.

Eliciting Behavior Change - Turning Ideas Into Action

- Provide training
- Reach the proper audience
 - Get their attention
 - Appeal to their values
 - Solicit their ideas
- Measure benefits using available tools
- Publicize the benefits
- Set the example
- Reward new ideas



Eliciting Behavior Change - Turning Ideas Into Action*

Social Marketing

- Identify barriers through surveys, focus groups, literature search, observing behavior
- Identify and publicize benefits
- Seek commitments – start small
- Use prompts



* Reference “Fostering Sustainable Behavior,” Doug McKenzie-Mohr and William Smith

Eliciting Behavior Change - Turning Ideas Into Action*

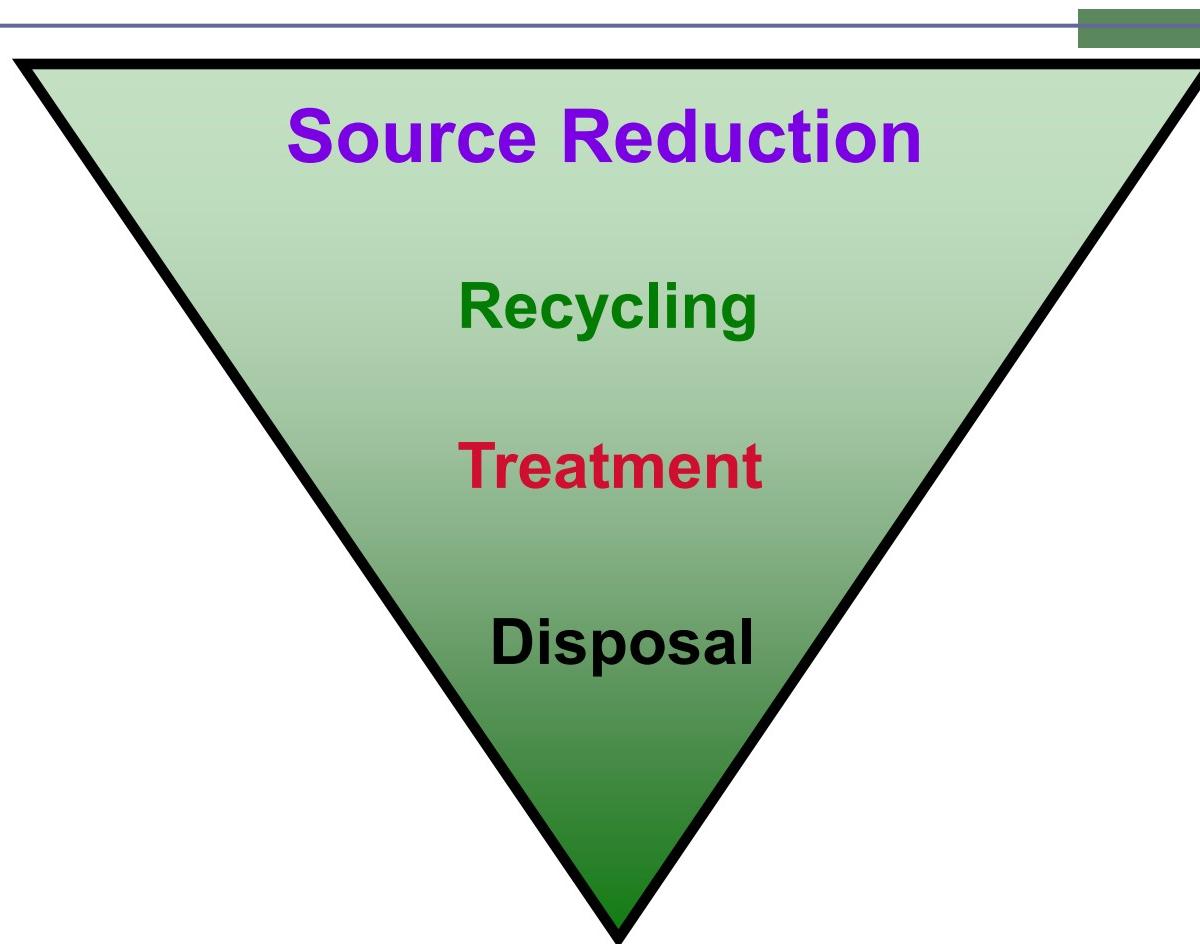
Social Marketing



- Communicate Effectively
 - Capture attention
 - Know the audience (attitudes, beliefs)
 - Use a credible source
 - Frame the message (losses and savings)
 - Ask for their input
 - Be clear and specific
 - Provide installation or activity goals
 - Provide feedback and incentives

* Reference “Fostering Sustainable Behavior,” Doug McKenzie-Mohr and William Smith

EPA Pollution Prevention Hierarchy



Let's get our priorities straight!

For More Information:

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Related Services:

- Integrated Solid Waste Management Plans
- Green Procurement Plans
- Green Procurement Training and Audits
- Sustainability Climate Surveys
- Solid Waste Characterization Studies
- Recycling and Composting Consultations